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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,208	06/19/2003	Darko Segota	11023.6	9025

7590 01/14/2005

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EXAMINER	
GARTENBERG, EHUD	

ART UNIT	PAPER NUMBER
3746	

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/600,208	SEGOTA ET AL.	
	Examiner	Art Unit	
	Ehud Gartenberg	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *papers filed through 11/22/2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) *1-30 and 35-41* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 June 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of the species of Fig. 9 is acknowledged. Figure 9 teaches "a semi-enclosed environment in the form of a jet engine exhaust nozzle". Claims 15 and 22 are withdrawn from consideration as per Applicant's indication.

2. The following independent claims are not considered generic and reading on the selected species for the following reasons:

Claim 1 claims "An internal fluid flow regulator that influences fluid flow about a surface of an internal flow device"; a jet engine exhaust nozzle is not an internal flow device because it discharges to the atmosphere and not to another component of the jet engine.

Claim 20 claims "An internal flow surface part of an internal flow device or system"; a jet engine exhaust nozzle is not an internal flow device because it discharges to the atmosphere and not to another component of the jet engine.

Claim 35 claims "a conduit". The AMERICAN HERITAGE DICTIONARY (1992), defines the term

con·duit

con·duit (kŏn'dĭ-ĭt, -dĭt) *noun*

1. A pipe or channel for conveying fluids, such as water.
2. A tube or duct for enclosing electric wires or cable.
3. A means by which something is transmitted: *an arms dealer who served as a conduit for intelligence data.*
4. *Archaic.* A fountain.

The highly complex structure of a jet engine exhaust system designed to withstand high-temperature and high-velocity gases would not read in a generic fashion on "a conduit" as defined by the dictionary. Also note that the term "conduit" implies a channel to convey a fluid from a source to a place of use, which is distinct from the purpose of a jet-engine exhaust that merely expels hot gases from the engine to the atmosphere in order to produce thrust.

Claim 36 claims "A method for influencing internal fluid flow and regulating pressure gradients within an internal flow device or system"; a jet engine exhaust nozzle is not an internal flow device because it discharges to the atmosphere and not to another component of the jet engine.

Therefore, claims 1-30 and 35-41 are further withdrawn from consideration by the Examiner, as not reading on the elected species of Fig. 9.

Claims 31-34 have been examined.

Drawings

3. The response filed 11/22/2004 failed to comply with the requirement of the previous Office Action to file drawings compliant with 37 CFR 1.84. This notice serves as a reminder.

Specification

4. The abstract of the disclosure is objected to because it is too long. Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities: it is full of typographical errors, e.g., on p. 46, l. 3, "place" is an error for -- placed --.

Appropriate correction OF ALL THE TYPOGRAPHICAL ERRORS is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the disclosed invention is inoperative in the sense that it does not operate as disclosed and as claimed, and therefore lacks utility. The disclosed and claimed pressure drop downstream the drop face contradicts the natural laws governing fluid mechanics. The lack of utility is explained in detail in the rejection under 35USC112, 1st paragraph below.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 31-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claims 31 and 34, the limitation limiting the pressure recovery drop comprising at least one drop face "of a calculated distance formed therein"; the "calculated distance formed therein" is not enabled, i.e., how it is calculated. Furthermore, "said fluid flow

regulator functioning to optimize air flow, reduce separation of said fluid over said first surface of said nozzle, and reduce induced noise." The following limitations are not enabled on how to be practiced: "to optimize air flow, reduce separation of said fluid over said first surface of said nozzle, and reduce induced noise."

In claim 32, the positioning of the flow regulator at "an optimal pressure recovery point" is not enabled in how to identify it. Furthermore, the limitations "imbalanced or unequal pressure gradient which ..... induces friction and pressure drag that ultimately increases the separation potential of said fluid" are also not enabled. Just what is an "imbalanced or unequal pressure gradient which ..... induces friction and pressure drag" and how this ultimately increases the separation potential of said fluid" is not enabled. Incidentally, friction is a necessary condition for a fluid to stay attached to a surface, and the point of separation is always a point of zero friction. In the same claim, the specification does not enable how laminar flow reduces the separation potential of the fluid. Usually, the turbulent boundary layers reduce the separation potential of the fluid, and a widely known and popular example is the purposely provided surface roughness of golf balls, that cause the boundary layer to become turbulent, and consequently the separation point is moved downstream.

In claim 33, "sub-atmospheric barrier" is not enabled; furthermore, if the barrier is "sub-atmospheric", then atmospheric air would rush into the nozzle where the pressure is sub-atmospheric, rather than exhaust gases be discharged to the atmosphere. In this respect, the Applicant is required to make a clear and unequivocal statement whether downstream of the drop step(s) the pressure of the flow increases or decreases.

Regarding the specification, it is not clear what is the Dargan nozzle. A search of the trademarks database at the USPTO failed to reveal such a trademark. Applicant is required to file documentary evidence about this nozzle in an IDS.

9. Regarding Applicant's illustration of his invention in the two concluding examples starting on p. 47, note that none of them are relevant to the elected species, because neither water flowing under the action of gravity nor a siphon gun operate in a similar fashion or have the same limitations as a jet-engine nozzle.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 31 and 34 recite the limitation "said first surface" in the last line of the claims. There is insufficient antecedent basis for this limitation in the claims.

12. Claim 33 recites the limitation "said higher kinetic energy fluid" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Mazzoni 2496351 that discloses the claimed invention as disclosed and as claimed: a nozzle or an exhaust system (Figs. 1 and 2) having an intake 4, a surface relating to

said intake 3, a discharge 4, at least one flow regulator comprising a leading edge, a trailing edge and a pressure recovery drop 11. All the other claimed limitations are treated as desired results and given little patentable weight. To the extent that Applicant's claimed invention for example reduces noise, Mazzoni's apparatus having an identical geometry and structural limitations as disclosed and as claimed, did the same.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Pocket Ramjet Reader, p. 33, United Technologies Corporation 1978.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ehud Gartenberg whose telephone number is 571 272 4828. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571 272 4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ehud Gartenberg
Primary Examiner
Art Unit 3746

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